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ABSTRACT

The primary purpose of this study is to identify the management problems of research libraries. The study suggests some approaches to solve these problems and sets priorities for action. The discussion is focused on the future and attention is directed to topics which promise to be significant in the context of the operating environment anticipated for research libraries and the universities of which they are a part. Areas in which impediments to effective university library management exist are: (1) planning, (2) objectives and requirements, (3) operations, (4) organization, (5) staffing, (6) facilities, (7) financing and (8) interinstitutional arrangements. Each of these areas is discussed in Chapter III - "Recommended Approaches to Improved Management of University Libraries." Chapter I discusses the implications of higher education trends for university libraries, Chapter II describes current and anticipated problems in the management of university libraries and Chapter IV presents a plan of action. The Chapter materials are summarized in the exhibits. This document previously announced as ED 047 719. (NH)

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PROBLEMS IN UNIVERSITY LIBRARY MANAGEMENT

A Study Conducted by Booz, Allen & Hamilton, Inc., for the Association of Research Libraries and the American Council on Education

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LI 002 958

Association of Research Libraries
Washington, D. C.

1970

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FOREWORD

This report on the management problems of research libraries has been prepared by the consulting firm of Booz, Allen & Hamilton for the Joint Committee on University Library Management of the Association of Research Libraries and the American Council on Education. Although the committee has worked directly with the consultants during the course of their investigation, it should be emphasized that this document is a statement by Booz, Allen & Hamilton.

While the primary purpose of this study was to identify problems, the report also suggests some approaches to their solution and sets priorities for action. Quite properly, the discussion is focused on the future. Attention is directed to topics which promise to be significant in the context of the operating environment anticipated for research libraries and the universities of which they are a part. Thus, the report will serve as a guide to future action as the committee works to promote solutions to the problems which have been delineated.

The present interest and involvement of the Association of Research Libraries in the subject of research library management stems from several sources. The topic is one that has attracted the attention of a number of individuals for many years. Some of these have been librarians with distinctive management skills. Others, from such fields as operations research, have been drawn to libraries because they see in their operations an important and challenging opportunity to promote systematic analysis and beneficial change.

This work, much of it continuing today, has provided valuable insights into research libraries. Perhaps of even more importance is the fact that it has served to develop further a long established recognition of the importance of effective management in the minds of the administrators of ARL libraries. This awareness is especially important at this time since librarians share with all other educators the problem of matching unparalleled obligations with resources, both human and financial, which seem forever insufficient to the task.

During 1968, discussions of university library management problems were held between ARL representatives and Dr. Fred Cole, president of the Council on Library Resources, Inc. These were followed by formal action in the spring of 1969 when the ARL board of directors created the Committee on University Library Management. Subsequent discussions with Dr. Logan Wilson, president of the American Council on Education, resulted in ACE co-sponsorship of the management study. Funding for the work of the consultants was provided by the Council on Library Resources.

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The ARL is pleased to acknowledge the support and the continuing interest and advice of the officers of the Council.

Stated simply, the ultimate objective of the ARL/ACE effort in the field of university library management is to develop management techniques appropriate to academic research libraries and to promote their use. The members of the Joint Committee, however, would underscore the fact that improved management methods alone will not guarantee good libraries, sensitive to and capable of meeting the needs of their users. Research libraries are educational in their essence, and effective management is only one of a number of elements required to meet their service obligations. Further, because libraries are by nature distinctive institutions, it seems evident that refinements or modifications in established management techniques will be required before their capabilities can be fully realized in the context of the research library.

One of the more important benefits of the discussions to-date has been the fuller comprehension by all involved of the complex nature of research libraries, both as components of universities and as elements in a *de facto* national information system. The interest and awareness that has developed during this initial period of discussion will be extremely important during the months ahead, since the members of the Joint Committee have committed themselves to continuing their efforts. Further, the American Council on Education has pledged its continued support, and the board of directors of the Association of Research Libraries has authorized the creation of an Office of University Library Management Studies, which will operate over a period of perhaps three years. The staff of the projected office will develop and monitor research projects, carry out specific research, promote coordination of related activity carried on under other auspices, and will serve as an information clearinghouse for members of the Association.

Given this commitment to the further development of effective university library management, the present report should prove to be a useful foundation for what will be a substantial effort dedicated both to those who use and those who operate research libraries.

Warren J. Haas, Chairman
Joint Committee on University Library Management

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INTRODUCTION

The objective of this study was to identify opportunities to improve the ways in which university libraries plan and use their resources—collections, people, facilities and equipment, and finances. In scope, the study focused on two aspects of university library resource management: (1) an assessment of needs and opportunities to strengthen the internal operations of the library, taking into account the constraints and limitations of existing and anticipated budgets, staffing, and program commitments; and (2) a review of longer-range opportunities to make more effective use of the collective resources of university libraries through closer interinstitutional arrangements.

The study began on April 1, 1969, under the sponsorship of the Association of Research Libraries with the cooperation of the American Council on Education. The Council on Library Resources assured the financial support for the study.

Following an initial meeting of the advisory committee to the study, members of the study team conducted field visits at six universities:

- Cornell University
- Duke University
- University of California at Los Angeles
- University of Connecticut
- University of Iowa
- University of Pennsylvania

The six universities were selected on the bases of their interest, the willingness and availability of their staffs to participate in the study and a broad range of criteria including size, sponsorship, and location.

During the field visits, 150 interviews were held with:

- University presidents (4)
- University academic officers and/or key assistants (11)
- University business officers and/or key assistants (11)
- University planning officers for capital plant (4)
- The university officer formally assigned responsibility for total planning (1)
- Deans (7)
- Faculty members (14)
- Students (18)
- Members of library committees (17)
- University librarians (6)
- Members of library staffs (57)

In addition to the interviews, the operations of the library were observed, and available documents, such as annual reports and budgets, were collected and reviewed.

A literature survey was conducted and a selected bibliography was developed. Additional perspective for the study was provided by a few interviews with librarians and others with expertness in fields such as data processing.

The study was enriched by the active individual and collective participation of members of the American Council on Education/Association of Research Libraries Joint Advisory Committee consisting of:

University Librarians

Warren J. Haas, Chairman
University of Pennsylvania
and subsequently
Columbia University

Douglas W. Bryant
Harvard University

Herman Fussler
University of Chicago

John McDonald
University of Connecticut

Robert Vosper
University of California at
Los Angeles

University Administrators

Willard L. Boyd, President
University of Iowa

Howard W. Johnson, President
Massachusetts Institute of Technology

Richard W. Lyman
Vice President and Provost
Stanford University

Allan M. Cartter, Chancellor and
Executive Vice President
New York University

Ex Officio, Association of Research Libraries

Stephen A. McCarthy
Executive Director

Louis E. Martin
Associate Executive Director

The advisory committee met four times during the study to appraise progress and provide comments and recommendations to the consultant team consisting of Messrs. H. Lawrence Wilsey, Douglas W. Metz, and Thomas L. Bertone.

The involvement of the American Council on Education was greatly facilitated by President Logan Wilson. Messrs. Fred Cole and Foster Mohrhardt of the Council on Library Resources enriched the study by their close involvement and sustained interest.

This report is structured in four chapters:

- Chapter I, as background, cites current trends in higher education, their implications for the university library, and the resulting impact on library management requirements.
- Chapter II describes the major problems in university library management in the areas of planning and budgeting, operations, organization and staffing, facilities, financing, and interinstitutional cooperation.
- Chapter III contains recommended approaches to the solution of identified problems, including general designs for needed subsequent research.
- Chapter IV identifies the major steps and considerations related to implementing the recommended approaches for strengthening the ability of the university library, in cooperation with the university, to meet immediate and anticipated future management challenges.

The study has demonstrated the value of and need for closer working relationships between university librarians and university administrators locally and at the national level through their respective professional associations. The need is based upon recognition of a mutual dependency:

- The librarian depends upon the university executive for information on administrative and faculty decisions, which effect shifts in the configuration of the academic program, in order that he can plan and budget adequately to provide the library resources to support the sophisticated and specialized demands of the faculty and students.
- The university executive depends upon the librarian for a unique and valuable perspective on the academic program, derived from his university-wide responsibility to support the major informational needs of the entire faculty and student body.

Progress toward improved management of the library (and consequent strengthening of the entire university) should be based upon cooperation in recognition of this mutual dependency. Such recognition should foster greater mutual understanding of the problems and constraints that confront the university, faced with growing financial problems, and the library, strained to provide quality library resources and services to a more

sophisticated and diverse scholarly community whose demands cannot always be anticipated.

In addition, the study has served to highlight a growing need for improved local access to information, whether located in the university library or elsewhere. Rapid expansion of recorded information, rising costs, and growing sophistication and specialization in scholarly demands upon the library require acceleration of efforts to establish interinstitutional arrangements adequate to speed access to collections in multiple locations and, thereby, to make more efficient use of the nation's research library resources. Progress in this direction will be the most difficult to achieve since close and sustained cooperation between the library and the university, among universities and university libraries, and between university libraries and the federal libraries will be required.

H. Lawrence Wilsey
Douglas W. Metz
Booz, Allen & Hamilton, Inc.

SUMMARY

The trends in higher education have had and will continue to have a major impact on the university library—the primary vehicle for access to man's recorded knowledge. As universities continue to grow in size and/or complexity, so will university libraries. Library budgets can be expected to increase; book costs, for example, continue to increase faster than the general cost of living. The expectations and demands of library users have increased and changed in character. Teaching and research are becoming more diverse and specialized with stress on both individual and team research at the undergraduate and graduate levels. Undergraduates are making increased use of graduate student library collections.

Access to library resources will have to be improved in light of scholarly demands for more rapid and reliable access to the growing body of recorded knowledge. These demands will strain the capacity of a single library to meet the teaching and research requirements of its constituency and will necessitate more aggressive pursuit of interinstitutional linkages among libraries and the application of new technology in storing, retrieving, and transmitting knowledge. Thus, the role of the library can be expected to continue to transcend that of the university in some respects.

These needs and trends imply continued expansion of university library budgets with financial planning and control in the university library becoming increasingly important. Both universities and their libraries will need to plan very effectively to insure their ability to meet service requirements and to make the most effective use of all available resources. The challenge of management in the university library is to make the most effective justification, allocation, and use of limited resources in relation to the needs and objectives of the university community. The task of management implies the use of the tools of organization and of systems in planning, budgeting, utilizing, and evaluating the resources and activities of libraries.

Impediments to effective management of university libraries exist in a number of areas:

- **Planning**—The need for more comprehensive library planning and budgeting systems, which, for the near and longer term, specify (1) the role and requirements of the library in relation to the academic program of the university; (2) the library's objectives and plans in support of academic programs; and (3) the library resources (financial, personnel, and physical materials, facilities, and equipment) needed to implement agreed upon plans.
- **Objectives and Requirements**—The need for improved library statistics for use as tools to determine the cost and effectiveness of library

programs and services in relation to academic program requirements.

- **Operations**—The need for standards to measure and control the flow of work in the library; the need to explore feasible applications of automatic data processing which are transferable from one library to another; and the need for greater codification of operating policies, systems, and procedures for use in training library personnel, controlling operations, and delegating responsibility.
- **Organization**—The need to strengthen the service delivery capacity of university libraries through formal organizational recognition of several management functions, such as planning and research, budgeting, and personnel development, which are vital to effective and efficient resource utilization, delivery of services, and communication flow within the library.
- **Staffing**—The need for internal and external formalized programs for training library personnel in management techniques and skills.
- **Facilities**—The need to undertake periodic analyses of space utilization in the library.
- **Financing**—The need to explore more fully alternate sources of financing of university libraries, including increased federal support.
- **Interinstitutional Arrangements**—The need for more effective linkages of library resources to realize improved bibliographic control of and access to information and more effective use of national library resources.

Summarized, the recommended approaches to the solution of major management problems in these areas include the following actions:

1. Planning

As a first step, the Association of Research Libraries (ARL) should sponsor recommended research to develop university library planning systems. Libraries should not await refinements in university planning systems to strengthen planning for the library. The ARL, together with the American Council on Education (ACE), should continue cooperative efforts to develop improved planning systems. The individual university and library should take steps to involve the librarian in top staff and university planning councils and develop procedures to speed the flow of information to the library on academic plans as they evolve. Each library should establish systematic procedures and staff responsibility for gathering information on developing academic programs. In addition, staff expertise in planning and budgeting techniques should be strengthened. Libraries also should make increasing use of narrative program justification which stresses cost/benefit analyses in planning and budgeting.

2. Objectives/Requirements

The university and the library should seek agreement, where required, on the library's role in the university. The library should, where required, take the lead in articulating its perception of its role in the university community. The ARL should develop a guide for use by libraries in defining their respective roles in their universities as a basis for definition of objectives and requirements for library resources to support academic programs. The ARL, in addition, should initiate recommended research to develop systems which provide meaningful statistical data for library management information and reporting.

3. Operations

Research should be undertaken to develop work standards and model systems for the more routine manual operations in libraries. Further research and exchange of information should be undertaken on developments in library automation and the transferability of automated systems from one library to another. The ARL should assume responsibility for sponsoring research in the areas of manual and automated systems. Locally, the university and library should examine needed changes in university accounting systems to provide the library with improved data for measuring the cost of various library operations. To assure adequate codification of operating policies, systems, and procedures, each library should possess a manual which contains them. The ARL should develop guidelines which suggest the general format and content of such operating policy manuals.

4. Organization

Research under the sponsorship of the ARL should be initiated to identify alternate feasible plans of library organization and staffing to assure responsiveness to user demands, professional staff interests, and needed emphasis upon management functions such as planning, budgeting, and personnel training and development. The university and the library should arrange to involve top staff more formally and systematically in the university organization for planning and decision-making. The individual library should develop strengthened staff capabilities in planning, budgeting, and personnel training and development.

5. Staffing

A national approach to resolving library manpower problems should be adopted. The ARL should support current and future efforts to identify short- and long-range needs for university

library personnel and the anticipated availability of such personnel. The ARL should consider providing library manpower information clearinghouse services to its constituency. Locally, each library should broaden training opportunities for staff to improve management skills, particularly at middle management levels.

6. Facilities

Increased emphasis should be given to management considerations in library facility planning and space utilization. For example, the problem of centralization versus decentralization of library facilities on campuses has been and will continue to be a major concern of university libraries, scholars, and university administrators. This problem and others related to use of facilities are complex and differ considerably from institution to institution. Consequently, the approach to solutions of such problems should take into account the results of studies conducted by individual libraries and the recommended research to enhance knowledge of feasible applications of automation and to develop more efficient and effective systems for the ordering, processing, distributing, and maintaining of library materials. Each library should conduct periodic analyses of space utilization employing proven industrial engineering techniques to assure that the best use is made of existing space.

7. Financing

Increased emphasis should be given to pursuit of additional sources of financial support of university libraries. With growing evidence that university libraries will be supported in the future at less than the budgetary growth rates of the past decade or two, alternate funding sources for libraries should be sought. The ARL, with the support of the ACE, should continue to seek increased federal support of university libraries. In addition, university libraries should work on a continuing basis with university officials to discuss library needs and alternate sources of funding for library operations.

8. Interinstitutional Arrangements

Opportunities for increased interinstitutional cooperation in the use of library resources should be pursued more aggressively. The ARL and the ACE should jointly sponsor research designed to identify new approaches to and requirements for interinstitutional cooperation. Consideration of interinstitutional arrangements and the financial needs of university libraries should take into account the potential role and service capabilities of the Library of Congress,

other national libraries, and organizations such as the Center for Research Libraries. The research should investigate the impact on the productivity and effectiveness of the individual scholar of existing and possible future interinstitutional arrangements for the sharing of library resources.

* * * * * * *

Improved library management per se will not be sufficient to provide the quality and level of services needed to support existing and future academic programs. Although the dollar-savings opportunities through improved management are limited in scope, significant benefits are possible.

- More effective management through improved organization can (1) contribute qualitatively to improved responsiveness and service to library users and (2) provide strengthened supervision and accountability for the quality and quantity of service rendered by a specific individual or staff unit.
- Systematic, well defined procedures for planning and budgeting of resources can assure that available resources are allocated and applied to services that merit priority as determined by a comprehensive program planning process.
- Studies which apply industrial engineering techniques to essentially routine manual procedures common to library operations frequently result in personnel cost saving opportunities ranging from 10% to 20%.
- Studies comparable to the above which focus on space utilization commonly identify space savings in the same order of magnitude.
- Sufficient time, in most instances, has not elapsed to determine cost savings resulting from automated procedures in library operations. Although there appears to be general agreement that the overall quality of and capacity for service have been increased, operating costs have risen.
- The cost/benefits of strengthened arrangements for interlibrary cooperation must await data derived from operating experience and standards of measurement which today are lacking.

CHAPTER I

TRENDS IN HIGHER EDUCATION AND THEIR IMPLICATIONS FOR UNIVERSITY LIBRARIES AND UNIVERSITY LIBRARY MANAGEMENT

The purpose of this chapter is to establish a background for the study by highlighting trends in higher education and university libraries and their implications for the management of university libraries. The growing significance of higher education in the American educational system and the challenges confronting it are succinctly highlighted in the Special Report and Recommendations of the Carnegie Commission on Higher Education:

> From the beginnings of the Republic, education at various levels has played a vital role in the building of a strong democratic society. At earlier stages in the nation's development, this role was chiefly the responsibility of the primary and secondary institutions. Now, as education through high school has become almost universal, as knowledge has increased, as the professional and intellectual demands of modern society have become ever more complex and exacting, the responsibility has shifted increasingly to America's colleges and universities.
>
> Today, the nation looks to our institutions of higher learning to meet many of our most important needs:
>
> > More and more Americans, with aspirations for a better life, assume the necessity of a college education.
> >
> > Equality of opportunity through education, including higher education, is beginning to appear as a realistic goal for the less privileged young members of our society.
> >
> > The economy is dependent upon basic research and advancing technology, and upon the higher skills needed to make that technology effective, to assure national economic growth and well-being.
> >
> > More managers, teachers, and professionals of all sorts are required to serve our complex society. More health personnel are essential to staff the fastest growing segment of the national endeavor.

> The cultural contributions of higher education take on wider dimensions as rising levels of education and growing affluence and leisure make possible greater concern with the quality of life in the United States.
>
> Above all, the nation and the world depend crucially upon rigorous and creative ideas for the solution to profoundly complex issues.

What the American nation needs and expects from higher education in the critical years just ahead can be summed up in two phrases: quality of result and equality of access. Our colleges and universities must maintain and strengthen academic quality if our intellectual resources are to prove equal to the challenges of contemporary society. At the same time, the nation's campuses must act energetically and even aggressively to open new channels to equality of educational opportunity.[1]

1. Universities Today and in the Decade Ahead Face the Greatest Challenges in Their Histories

Today, universities face the greatest challenges in their histories in meeting the needs specified by the Carnegie Commission.

(1) The Interest and Expectations of Students, Faculty, the Community, Nation, and World are Changing

Some universities, in addition to their traditional role of teacher, inquirer, and critic, are becoming action oriented and involved in social problems. This is not to say that universities in general have made a commitment to play the role of problem solver, since a large body of opinion holds that the university should adhere to its traditional role. Universities generally, however, are confronted with the challenge of responding to the teaching and research interests of a multiconstituent university community functioning in a society undergoing rapid technological and social change.

(2) Designing, Developing, and Administering Educational Programs to Meet Changing Requirements and Expectations Will Pose Continuing Challenges in the Decades Ahead

As evidenced by the establishment of urban and ethnic studies and the sustained emphasis on interdisciplinary studies in university curricula, the content of many educational programs must change to meet rapidly changing social, political, economic, and cultural requirements.

Universities must have planning systems which are responsive to shifting needs and, at the same time, assure fiscal responsibility in the face of competing claims for limited resources to meet such needs. The response of universities to student action and demands for a greater voice in university governance will challenge established concepts of organization and systems for planning new educational programs.

(3) The Maintenance of Quality in an Academic Staff, Which, Combined with the Students, Makes Up an Outstanding Community of Scholars, Will Pose a Continuing and Growing Challenge to Each Institution

The requirement to develop and maintain excellence in the university community assumes increasing importance in light of the quantitative expansion experienced in higher education in recent years. This growth is evidenced by:

- Continuing increases in student enrollment—a 22% increase in the most recent three years, 1964-65 to 1967-68.
- Increases in the number of new academic programs, particularly in interdisciplinary areas, such as foreign area studies, the sciences, and, more recently, ethnic studies.
- Increases in the number of advanced degrees being conferred—102% for the masters and 95% for the doctorate from 1960-1961 to 1966-67.
- Increases in the number of faculty—151% from 1949-50 to 1967-68 (estimated).

Evidence exists that the rates of growth may be slowing in some of the indexes of the recent quantitative growth in higher education. The challenge, however, of strengthening the quality of teaching and scholarship concurrent with the assimilation of future growth and consolidation of past expansion remains a primary requirement in the university community. Even in institutions where total enrollment has stabilized in recent years, the trend toward establishment of interdisciplinary studies and increasing specialization in course offerings enlarges the scope of the university's responsibility for maintenance of quality in academic programs. Many universities with enrollment ceilings have increased the proportion of graduate to undergraduate students, resulting in more diversified and specialized academic programs.

The impact of these trends on the university library, as it seeks to respond to the changing configuration of the academic program and scholarly interests, is very real and is discussed subsequently in this chapter.

(4) Providing the Financial Resources Required to Maintain and Develop Public and Private Institutions Will Be Increasingly Difficult

The financial problem assumes several dimensions.

- University expenditures have increased in excess of 50% every three years since 1955-56.
- Universities—public and private—are affected by inflationary

trends in personnel, construction, supplies, and equipment costs.

- Publicly sponsored universities are experiencing public resistance to higher taxes.
- Private universities in particular are confronted with a situation where expenditures per student have risen much more than endowment funds per student.
- Organized research at universities (largely federally sponsored) has increased dramatically. Federally sponsored research has risen from $0.5 billion in 1958 to $2.2 billion in 1968, an increase of 340%. There is growing evidence, however, of equivocation in federal support for research, with declines in some areas already experienced.
- The sources of funding of universities have increased in number, thus making the financing of universities more complex.

2. The Trends in Higher Education Have Had and Will Continue to Have a Major Impact on the University Library

The traditional mission of the university library has been to supply the library resources to meet the scholarly needs of faculty and students. Developments in higher education have levied new and additional demands upon university libraries, adding new dimensions and requirements to their role.

(1) The Role of the Library Will Continue to Transcend That of the University in Some Respects

As evidenced by the report of the National Advisory Commission on Libraries, there is increasing recognition that a single university library is but one element in the intellectual resource represented by all of the nation's libraries. To an increasing extent scholars demand information beyond the capacity of any one library to provide.

The rapidly growing body of recorded knowledge will require improved access to library resources beyond those of the individual university. To accomplish this, linkages among libraries are becoming increasingly evident, with such networks growing in importance. Many librarians and users of library resources, however, express concern that the evolving networks and consortia of institutions operate sporadically and in an uncoordinated manner, and may include in their memberships inappropriate institutions in some instances. Cooperative collection development among libraries, for example, has not been easy to effect nor has the permanence of such arrangements been easy to assure.

To the extent that university libraries are linked more closely and access to their collections is improved, they will become "nationalized"

and "internationalized," assuming roles that transcend the particular educational requirements of the institutions of which they are part. The implications for funding of university libraries in the exercise of such broader roles are clear. Additional funding from new sources will be required.

(2) As Universities Continue to Increase in Size, So Will University Libraries

Evidence of this trend is manifested in statistics on net growth of collections of college and university libraries and of publications.

- The number of volumes held has increased from 176,721,000 in 1959-60 to 265,000,000 in 1965-66, a 50% increase.[2]
- The number of volumes added annually has increased from 8,415,000 in 1959-60 to 18,000,000 in 1965-66, a 114% increase. (However, the number of volumes per student has declined from 51.9 in 1959-60 to 45.8 in 1965-66.)[3]
- Over the same period, the number of registered titles published each year in the United States alone, has doubled from roughly 15,000 to 30,000.[4]

The impact of size has been visible in the major expansion of library facilities that has occurred in the last decade.

Continued growth in volume of publications and acquisitions is expected. There is little expectation in the library profession and the publishing industry that the rate of such growth will diminish significantly over the next decade. Thus, in the near future, the physical requirements of libraries can be expected to increase unless (1) library budgets are cut severely, (2) major applications of space-saving technological breakthroughs in information storage are realized at a rate greater than in the past, and (3) arrangements for sharing library resources are established and implemented at a pace considerably faster than at present. It is not likely that these variables will offset the need for more space to accommodate expanding collections (and in some institutions the increased number of scholars) over the next decade.

(3) The University Librarian Will Have Increasing Responsibility Due to Growth in the Complexity of the University Library

The university library can be expected not only to be larger but also to be a more complex institution in light of the trends in higher education previously cited. The university librarian will be responsible for an institution:

- Possessing greater diversity and specialization in holdings
- Requiring new techniques to improve access to and storage and retrieval of information

- Demanding library personnel skilled in responding to increasingly sophisticated scholarly demands.
- Growing in sheer size—demanding increased personnel, financial, and physical resources

The university librarian in the future will thus be confronted with (1) a larger enterprise to manage and (2) the task of planning for and leading a more subtle, complex, and sophisticated institution—intellectually and technically—one that will increasingly play a national and international role as an intellectual resource.

(4) User Expectations and Demands Have Increased and Changed in Character

Universities are stressing both individual and team research at the undergraduate and graduate levels. Undergraduates are making greater use of graduate student library collections. The increases previously cited in the number of academic programs, graduate students, and advanced degrees conferred by universities have resulted in demands for additional books and expanded services. The increasing amount of information which is computer based (chemical and other abstracts and soon the 1970 national census tapes) has resulted in expanded user expectations for access to such information. Adding to these needs is the recent growth in postdoctoral research. Requests also have increased for public services provided to business and industry and other nonacademic groups in geographic areas surrounding the library. These services often are not reflected specifically in library budgets.

(5) Access Will Have to Be Improved

User demands for more rapid and reliable access to the growing body of recorded knowledge are expected to increase. The capacity of a single university library to supply the information needs of the faculty, students and public users is already strained. Aggressive pursuit of interinstitutional linkages will be required. New technology in storing, retrieving, and transmitting knowledge is emerging to support efforts to improve access.

(6) Library Costs Can Be Expected to Increase

Although the rise in university library personnel costs has been commensurate with the increase in the average price index, the prices of publications have risen much faster. From 1957 to 1967, the overall price index rose from 100.0 to 116.3. During the same period, the price index for hard-cover books rose from 100.0 to 151.0 and periodicals from 100.0 to 163.0. Barring a significant and prolonged economic recession, the inflationary trends of the past can be expected to continue.

The establishment of library services to serve the needs of new academic programs, such as area and ethnic studies, entails significant new and ongoing costs in library operations. Similarly, the use of new media, such as computer tape and microform, and techniques, such as automation, involve significantly increased one-time and recurring costs for university libraries.

(7) Budgets of University Libraries Can Be Expected to Continue to Expand

As a consequence of the foregoing factors, library budgets have increased, and will continue to expand, reflecting the increases in supporting resources (personnel, books, and facilities) required to accommodate expanded academic programs, rising costs, increases in publications, and increases in user expectations and demands.

(8) The Financing of Libraries, as of Universities, Will Become Increasingly Complex

In the universities surveyed, it was found that 10% to 25% of their annual expenditures were derived from nonuniversity (primarily federal government) funding sources. Pressures for new sources of funding can be expected to mount in light of increasing budget requirements and the implementation of additional and stronger interinstitutional linkages prompted by demands for improved access to library resources external to the university.

3. Changes in and New Approaches to the Management of University Libraries Will Be Required

The impact of trends in higher education and of problems confronting university libraries has significant implications for library management. It should be established clearly that the management of universities and their libraries cannot be equated with that of the usual commercial enterprise. Universities and their libraries are organizations of professionals engaged in discovering and transmitting knowledge. Working relationships are frequently unstructured. Work products are services of an intangible nature and difficult to measure. Demand, particularly in terms of library services, is "open-ended" and, therefore, difficult to estimate for planning purposes.

(1) Universities and Their Libraries Will Need to Plan Very Effectively to Ensure Their Ability to Meet Service Requirements and Make the Best Use of Available Resources

Universities will need to make better appraisals of what will be needed if they are to respond to rapidly changing challenges set out previously in this chapter. Universities, by deliberate decision, will need to sort out what programs and responsibilities they can and

cannot assume in light of estimates of available resources. Libraries, in turn, will need to keep abreast of changes in the university program, develop plans and programs to support research and teaching and provide access to library resources by applying technological advances in effective and innovative ways. Librarians must know of anticipated changes in university programs while they are in the formative stages in order to (1) identify the cost impact upon the library and (2) develop plans for the necessary library resources.

(2) University Libraries Will Be Challenged to Adapt Their Organization to Provide Expanded and Increasingly Sophisticated Services

The university library must be organized in a way that will direct the diverse professional talents of the library staff in support of the increasingly complex and sophisticated demands of the scholarly community. At the same time, library organization must satisfy the career development needs of staff and provide channels for staff interaction and participation in library planning and policy development.

(3) Skilled Staff Will Need to Be Provided and Used with Maximum Effectiveness

As libraries grow in complexity, their staffs must include professionals with more extensive subject matter and language competencies, expertise in management, and knowledge of the systems and methods of information access, storage, and retrieval. Libraries must acquire the capability to identify, recruit, train, and retain a staff possessing a diversity of skills and a high level of competence in many areas.

(4) Physical Facilities Will Need to Be Used More Effectively

University libraries generally have undergone significant physical expansion over the last decade to accommodate growing collections and to meet the needs of expanding numbers of students and faculty. Many libraries, particularly on older, established campuses, have limited space for expansion. This factor, plus the high cost of construction, will increase pressures on the librarian to make more efficient use of space. To accomplish this will require increased reliance upon the techniques of industrial engineering, including space standards and work flow and space utilization analyses.

(5) Financial Planning and Control in the University Library Will Become Increasingly Important

Recent evidence suggests that the rate of annual increases in library budgets is declining. Many librarians report—and incomplete statistics appear to support them—that expenditures for libraries in

relation to those for the university as a whole have declined over the past decade. While information pertaining to the quality of the library is lacking at the historical base point, this apparent trend is disturbing to librarians and knowledgeable faculty.

During this same decade, it is acknowledged that (1) academic programs have undergone rapid expansion and (2) library costs have risen because of inflation of book costs, increased personnel costs for higher level professional staff, and new personnel and equipment costs associated with the use of automation in the library.

In light of these factors, university libraries will need the managerial capability to demonstrate in a persuasive manner the adverse consequences of any reduction in levels of funding support.

In addition, library management will require current, accurate, and meaningful reports on the status of library operations to assure effective allocation of limited financial resources. The use of computers in the financial management function has proven effective and efficient in many enterprises, including universities and libraries. Increased reliance upon the computer in library financial operations is foreseen.

(6) New Approaches to Financing Libraries Will Need to Be Sought

The prospects of continued increases in library costs (including a new order of magnitude of costs to introduce technological advances such as automation), a leveling off in the rate of library budget growth, increased requirements for public services, and growing demands for access to and linkages with library resources beyond the university will require exploration of new sources and methods of financing university libraries. University librarians individually and collectively must pursue systematically, in cooperation with university administrators, new approaches to library funding.

(7) Management Approaches Used in Other Fields Will Need to Be Explored and Used, When Appropriate, in the University Library

The university library in the last century has evolved from a book, periodical, and manuscript repository for scholarly use—managed by scholars—to a large, intricate institution managed by professionals trained in library science and skilled in meeting the information needs of scholars. Because of the sheer size and complexity of contemporary university libraries, and the need to make the most effective use of scarce human, financial, and physical resources, the management dimension in library operations becomes a critical priority.

Increased reliance on industrial engineering approaches will be needed to assure that work of a routine nature is performed efficiently and that the best use is made of space. Operations research approaches

to decision-making, involving systems and cost/benefit analyses, will need to be used to assure that all feasible alternatives are explored before resources are committed to specific courses of action. In addition, librarians who now perform most management functions in the library will need to evaluate approaches used by analogous institutions and apply them in the management of university libraries. An example is the development of a distinctive career profession for the administration of hospitals, medical centers, and other health care institutions.

* * * * * * *

This chapter has provided background on trends and needs affecting the university library and their implications for the management of the library. The next chapter focuses on findings resulting from visits to six universities, selected on the bases of size, sponsorship, location, and the interest and willingness of their staffs to participate in the study. The visits involved interviews with selected library staff, university administrators, faculty, and students. These were supplemented by on-site observations, selected outside interviews, and review of available operating documents, such as library and university budgets and annual reports.

FOOTNOTES

1. Carnegie Commission on Higher Education. *Quality and Equality: New Levels of Federal Responsibility for Higher Education.* A Special Report and Recommendations by the Commission. New York: McGraw-Hill, 1968, p. 1.
2. *1969, The Bowker Annual of Library and Book Trade Information.* New York: R. R. Bowker Co., 1969, p. 26.
3. *Ibid.*
4. *1967, The Bowker Annual of Library and Book Trade Information.* Edited by Phyllis B. Steckler. New York: R. R. Bowker Co., 1967, p. 49.

CHAPTER II

CURRENT AND ANTICIPATED PROBLEMS IN THE MANAGEMENT OF UNIVERSITY LIBRARIES

The preceding appraisal of the needs of and trends in higher education and their impact on the university library clearly points to a growing requirement for effective and efficient planning and use of library resources to support academic programs. This chapter contains preliminary findings and conclusions on major problems of university library management. It is based on a partial literature review and analysis of information gained through visits to six university campuses not necessarily typifying the entire population of universities and university libraries.

1. Problems Related to Planning

In its broadest sense, planning is an orderly means used by an organization to establish effective control over its own future. The administrative group is engaged in planning when it selects and defines the organization's philosophy and objectives and determines the means required to achieve them.

Effective planning is more difficult to achieve in universities and their libraries than in other organizations, even though the methods of planning are the same. The difficulty derives from the complexity of university organization. This very complexity, however, underscores the importance of planning to the achievement of operational effectiveness.

Universities have a broad scope of operations that include teaching, research, and service programs carried on within many departments, by divisions within departments, and by institutes and affiliated institutions.

Furthermore, coordinated long-range planning in the university community is complicated by the faculty's concern for professional and academic freedom, its traditional independence in determining the scope and content of academic programs, and its concentration on immediate needs of students and research projects rather than on the implications of such needs for the total university. Planning is complicated by the desirable tradition of the university to foster faculty initiative and innovation in teaching and research. Some faculty and students oppose the practice of

program planning for universities, since in their minds it represents a further bureaucratization of the university structure.

Because of the complexity and uniqueness of university and library organization and operation, the planning for these institutions requires an orderly and careful approach—an approach too rarely found in universities and university libraries. Rational planning should be sought, particularly during a period of growing constraints in financing higher education. The multiple purposes of a university and a proper concern for maintaining a high level of quality make planning all the more important. Although there is some question about the applicability of long-range planning, as it is typically understood, to the management of universities, university administrators and librarians recognize the growing demand in the public sector for achieving "efficiency" in universities through the adoption of a systems planning approach.

(1) The Frequent Lack of Comprehensive, Long-Range Plans in Universities Reflects the Absence of Many Elements of Effective Planning.

Planning involves several essential elements. The key characteristics of good planning are:

- **It must be comprehensive**—Planning must encompass the full scope of university operations.
- **It must assure meaningful involvement of students and faculty** The communications system should provide for (1) open and defined channels of communication fr[illegible] faculty and students to the administration of the library [illegible] the university and (2) feedback from the university admin[illegible]tion to the library and the faculty and students.
- **It must be orderly and systematic**—Planning must be pursued in accordance with a defined system of communications flow within the university. The system for planning should provide for multiple inputs and exchanges of information and for sequenced decision-making at the various levels of university organization.
- **It must be definitive**—Planning must make maximum use of quantifiable data and specificity in articulating objectives and plans.
- **It must be flexible**—Planning must recognize that the university is an institution of professionals. It must encourage faculty initiative in planning innovations in programs. It thus must accommodate the need for frequent updating of plans in response to needs as they are perceived and shifts in scholarly interest. It must recognize the essential "open-ended" nature of the "demand" side of the resource equation.

- **It must be action oriented and priority oriented**—Planning must result in plans that spell out the steps needed to implement plans and indicate the priorities among objectives and plans that compete for limited resources.
- **It must be understood by the university community**—Planning, to gain needed credibility and support, must assure that objectives, plans, and programs are communicated to and understood by faculty and students and by supporting institutions such as the library.
- **It must be supported by qualified administrative staff**—The requirements for planning in the university environment necessitate adequate staff support and the application of sophisticated planning techniques.

The universities surveyed evidenced recognition of the systematic, cyclical, and continuous nature of planning and had undertaken some positive steps to strengthen the planning process in the complex university environment. Many elements of effective planning nevertheless were missing in the universities surveyed. The universities varied in their approach to planning and in the methods and processes used. Although most universities had prepared long-range plans, the plans did not meet the criteria specified above. The universities did not utilize a formal comprehensive planning system for academic planning that:

- Defines clear academic program areas and specific objectives for each area.
- Defines and evaluates, through in-depth analytical studies, alternate methods for accomplishing objectives.
- Encompasses projections of total costs, including library support costs.
- Articulates planning decisions for the shorter and longer range in documents specifying resource requirements, schedules and responsibilities.
- Utilizes a planning staff to supervise the system, assure flexibility to accommodate needed revisions and updating, and perform analytical cost/benefit type studies.

Rather, most of the universities surveyed reviewed proposed academic programs on an ad hoc basis without reference to overall university objectives or overall plans that project the supporting resource requirements to a level of specificity that permitted reliable financial planning and comparison with income projections. It should be noted that despite major difficulties in forecasting income, the institutions did not emphasize financial reporting systems which routinely provide top management with "best estimates" of resources.

Changes in the curriculum were often the result of shifts in

scholarly interest and not of formal decisions. The faculty is a powerful influence in effecting changes because of its prevailing autonomy in course development and content, and in research.

(2) University Plans and Library Plans Are Often Poorly Related

No university surveyed in the course of this study maintained a fully effective system for relating library planning to university planning. All provided some mechanism for passing information on academic plans to the university library, such as faculty library committees, but none was considered notably successful.

Librarians are not initially a part of the planning process of the university. The libraries, as a consequence, utilized informal methods of obtaining information on university plans for changes in the educational program. These involved oral reports of library personnel assigned to work with academic departments, informal contacts with faculty and administration, and scanning of campus publications. This information, however, was not organized and maintained in a central location for planning purposes.

Librarians universally complained that they are not kept adequately informed of academic plans. University administrators freely admitted this but felt, as a practical matter, that it is the responsibility of the librarian to keep himself apprised. The absence of (1) a comprehensive academic program plan or planning system and (2) the rountine involvement of the librarian in the university planning process makes this task difficult for the librarian.

(3) University Libraries Generally Do Not Make Use of Effective Planning Techniques

The weaknesses cited in university planning systems also were found in the university libraries. Because of such weaknesses, existing library plans are informal and incomplete. Some documented plans for library buildings exist but these were not related to academic planning.

Plans for libraries are reflected in most instances in a one-year or two-year budget. These are inadequate for the basic planning task of establishing objectives and allocating resources among competing programs. For longer than two years, operating plans consist largely of the intention of the university librarian. It should be noted that limited time and staff capability for planning are available to the university librarian who now assumes this responsibility in addition to a broad spectrum of other administrative responsibilities, including, in many instances, budgeting. In short, library planning as it exists today is not adequate to anticipate and reflect the changing educational environment.

2. Problems Related to Objectives and Requirements

An essential first step in and the cornerstone of planning is the establishment of objectives pursuant to which programs can be planned and against which they can be evaluated. Well formulated objectives can provide a common frame of reference for university administrators and university librarians as they seek to plan their respective programs and relate them in ways that are mutually reinforcing and that assure the best use of limited resources.

(1) University Objectives—Especially As They Relate to Libraries—Often Are Defined Poorly

Formal and explicit definition of the university library's role in relation to the academic program has not been articulated and agreed upon in university and library planning documents. In many instances, it was found that the role of the library and the nature and extent of the university's commitment to and support of the library are influenced considerably by the nature of the personal relationships between the university's chief executive officer and the university librarian.

Librarians feel that many university officials and funding authorities make university resource allocation decisions without fully recognizing (1) the library's role as a "mirror-image" dependent on, and not independent of, the academic program; (2) the library's involvement as a segment of the total spectrum of national library resources available to scholars; and (3) the importance of a strong library in maintaining the quality of the academic program and attracting and retaining capable faculty.

(2) University Libraries Often Do Not Have Well Defined Objectives

Statements of what the library seeks to accomplish in terms of initiative or response to the subtle flux in academic programs generally are lacking. In short, library objectives have not been articulated, compiled, and classified as a basis for planning. This largely is the result of the library's assuming a generally passive posture in the face of the ad hoc planning by the university.

(3) Requirements for Library Collections and Services to Support Educational Programs Generally Are Not Well Defined

The necessary planning task of defining library program requirements is made difficult by the general absence of systematically formulated and well documented educational objectives and plans for educational programs.

The ad hoc academic program decisions common to the rapidly changing university environment generally lack documentation

regarding their impact on library resource requirements and, ultimately, library budgets. For example, the overall cost implications (present and future) of adding a faculty member in a new academic field usually are not defined.

(4) University Libraries Lack Adequate Means to Evaluate Performance and Resource Requirements

University librarians generally agree that no one has succeeded in developing a satisfactory approach to measuring the effectiveness of a university library. Some librarians doubt whether standards or "measuring sticks" of performance and resource needs can be developed.

Currently, judgments on levels of quality of collections and services are seriously impeded by lack of specific objectives, understanding of the relationship of resources versus performance, meaningful methods of measurement, and pertinent statistical data. Even with such tools, the task of evaluating library programs and services will constitute a major management challenge, since the library is essentially a professional service institution and not a factory production line operation.

University administrators generally feel that despite the problems flowing from the trends noted in Chapter I, the quality of library collections and some services has improved during the last decade. The university librarians in some instances agree, but believe that the libraries in many respects are falling behind in building, preserving, and improving collections needed to support expanding academic programs. Librarians also report problems in maintaining adequate levels of service occasioned by protracted emphasis on collection building at the expense of personnel budgets. Large backlogs of unprocessed materials (from one to two years) attest to this. Overall, the librarians adjudge that their capacity to keep abreast of university requirements has decreased despite growth in budgets, facilities, collections, services, and staff. This view reflects, in a larger context, the apparent disparity between the expectations of faculty and the resources available to the university.

Users of libraries, both students and faculty, were more critical of services—particularly the access to and the availability of library materials. Faculty expectations, in particular, impose new demands on the traditional services provided by the library. This is especially apparent in fields such as the sciences where information and information access requirements have multiplied rapidly in recent years.

(5) Meaningful Statistics Are Not Collected and Reported on a Comparable Basis by University Libraries

Most of the existing standards developed for libraries are quantitative in nature and do not relate meaningfully to educational and research effectiveness levels. In many cases, they are simply ratios that reflect existing relationships.

Statistics now collected by libraries consist largely of gross acquisition, circulation, and reference counts which are not refined into categories paralleling university academic and research programs. Consequently, lacking a consistent data base, it is not possible to validate cause/effect relationships between university and library programs, or to develop comparisons among university libraries.

3. Problems Related to Library Operations

One facet of management is responsibility for the systems and procedures employed in the internal operations of an organization. The soundness of the processes of operation is directly related to the efficiency and effectiveness in work performance and in planning, budgeting, controlling, and evaluating operations.

Several problems concerned with operating policies, budgeting, and the use of manual and automated systems in university libraries were identified.

(1) Operating Policies Generally Are Not Codified and Used as Management Guides

Except in a few areas, such as personnel administration and to some extent circulation, university libraries do not maintain unified and organized written policy statements to guide library personnel in operations. Frequently, decisions on operating policies are "formalized" as memos to the library staff. However, the memos are not recognized as policy statements of continuing validity to be compiled, organized, maintained, and made available for guidance.

As a result, close supervision and instruction of many employees are required, particularly for positions where there is a high turnover. At the same time, librarians report that they hear employee complaints of detailed supervision and boring work. The absence of codified operating policies also risks approaches to work which may not conform to sound and efficient management practices.

(2) Comprehensive, Program-Oriented Budgeting Systems Generally Are Not Used by Universities and University Libraries

Comprehensive, program-oriented budgetary systems generally are not employed by the universities surveyed. Budget preparation does not consist of the costing and scheduling of programmed plans that previously have been detailed and justified in narrative form. Existing budget systems are not a part of a larger planning system.

In university libraries, the budget preparation process is the only regularized planning process. It is not supported, however, by systems that assure consideration of objectives and program plans prior to development of budgets. Consequently, planning and budgeting are forced into a relatively short time frame, involving use of inappropriate formats and abbreviated processes.

Budget formats are oriented to resource input categories (e.g., personnel and equipment) rather than to categories focusing upon objectives and programs. Library budgets follow the line item format designed to control levels of resource expenditures. They are not, therefore, planning documents. A budget format designed for planning would retain line items but utilize, in addition, higher level categories related to desired outputs such as program (and subprogram) goals and activities.

Budget requests, moreover, are not supported by in-depth analytical justification. The usefulness of operational research and systems analysis techniques in libraries has been demonstrated and documented in library literature.

In most university libraries, budgeting is approached as an additional activity to be included in the overall managerial work load. No separate planning or budget staff exists. Budgeting is approached as a task which may consume considerable managerial time but requires no specialized expertise.

Assuming analytical staff capability, library planning, evaluating, and budgeting are handicapped by techniques, formulas, and ratios that are weak. Several varieties of formulas have been developed (e.g., the Clapp-Jordan Formula), but by common consensus the formulas are not rooted in empirical data.

Use of more sophisticated budgeting tools would enable libraries to develop stronger justification for maintenance and improvement in the quantity and quality of the collections and services needed to support adequately the academic program of the university. Without strong justification, library budgets can become vulnerable in times of reduced funding. Portions of library budgets, along with budgets for physical plant development and maintenance, are more susceptible to budget cutting pressures because the impact of some reductions in these areas is not immediately and easily discernible by faculty and students.

(3) Opportunities to Increase the Productivity of Library Employees Engaged in Routine and Repetitive Functions Often Are Not Pursued

Standards of productivity and work methods generally do not exist for book processing operations and for other operations, such as

circulation, that generally are performed manually in the library. These operations are susceptible to work flow analysis and development of work standards and controls that can yield increases in work productivity.

Although most libraries perform similar basic functions and offer similar services, standard systems designs and procedures for routine and repetitive operations have not been developed. It seems probable that model systems can be defined and applied in many university libraries.

Work methods, systems, and procedures generally are not documented. Consequently, subprofessional personnel require considerable training and supervision.

Opportunities for improvement of manual productivity, as well as organization and staffing, in the library should be viewed in light of recent developments in labor relations. In recent years, library employees have strengthened and, in many instances, established new organizations devoted to improving the working conditions and status of the professional and nonprofessional employee. Changes affecting the status and working conditions of library personnel, in most instances, must be reviewed and, in some cases, negotiated with employee organizations.

(4) The Use of Automatic Data Processing in the Operation of University Libraries Is Limited

Most systems now used in university libraries involve traditional, manual operations designed to accommodate the smaller work loads of earlier years. The higher work loads being experienced by libraries place severe stress on existing systems.

Practically, three general approaches are possible for meeting the demands of increased work loads: (1) expand the resources involved in current systems (e.g., space, personnel) to handle larger volumes; (2) redesign the systems but retain their essentially manual characteristics; or (3) design selected systems around an automatic data processing capability. Automatic data processing (ADP) would seem to promise major improvements in library operations.

To date, however, the contribution of ADP to library operations has been limited to (1) university-provided accounting, personnel payroll, and recordkeeping services, and (2) library-initiated systems for book ordering, circulation, and preparation of book catalogs for serials. Small systems staffs are being developed in many university libraries.

Librarians are cautious and prudently slow to move ahead in employing automated techniques because of:

- Difficulties in financing out of annual operating budgets the

high costs involved in developing, installing, and operating computer systems.

- Reports from other librarians who have installed automated systems to the effect (1) that the ultimate cost in money and time far exceeds original estimates and (2) that improved services generally result, but at the expense of higher ongoing operating costs. Since many ADP systems have been recently installed, verification of operating costs will require analysis extending over longer periods of time.
- The lack of a library-oriented technology. Most systems and equipment susceptible to use in library operations are designed for business applications and need to be modified for library operations.

Librarians are under increasing pressures from university administrators to extend automated systems to library operations generally and, in particular, to areas where automated systems have been developed such as in circulation control and acquisitions.

In some instances, university administrations have not resolved questions of computer responsibility, management and utilization. Some universities operate separate computer centers for university administration, faculty research, and assorted special projects. The library usually has the option of using excess time on existing computers or financing computer services on its own. However, in most instances, plans do not exist for the interface of the library's computer requirements with those of the university. In many instances the library reportedly has had to fend for itself in competing with other users for computer services within the university.

Overall, several findings can be made concerning future applications of automation in library operations.

- In light of the high cost of automation and the financial difficulties facing universities, demonstrations of practical results will be required to support commitments to a significantly broadened application of automation in university libraries.
- Little is known concerning the transferability of computer systems and programs from one library to another.
- Notwithstanding cost factors, improvements in services and efficiency are possible through demonstrated applications of automation to circulation control and aspects of technical processing.
- Considering the increasing use of and demand for information in computerized form, the long-range benefits of applying automatic data processing techniques to university libraries

to facilitate access to and the storage and retrieval of information should be emphasized rather than short-range operational benefits.

4. Problems Related to Organization

The organization of the library is the university librarian's primary management tool for focusing and directing the talents and energies of staff to deliver services to fulfill program objectives. It is also a means of balancing and coordinating work effort and for channeling internal and external communications and relationships.

The university library constitutes a special problem and challenge in organizational planning. The library is a professional enterprise serving a clientele primarily of independent professionals pursuing diverse intellectual interests.

(1) Existing Plans of Organization of University Libraries Appear Often to Be the Consequence of Gradual Development Rather Than the Result of Analysis of Requirements and Consideration of Alternatives

Existing library organization appears to have resulted from unplanned response to evolving needs, comparable to university organization of academic programs. Generally, university libraries have not made thorough evaluations of feasible alternate plans of organization to meet current and anticipated requirements.

Existing plans of organization make no clear distinction among alternate rationales of organization, such as program, function, geography or subject matter. Most plans of organization are pyramidal in structure and lack flexibility to adapt to changing requirements.

Librarians are confronted with the need to make organization responsive to trends which stress the greater flow of communications among staff and the greater involvement of professional staff in decision-making. This is an outgrowth of the previously cited strengthening of employee organizations within the library and the increased number of higher level professionals which libraries have added to serve the specialized and sophisticated research and teaching needs of the faculty and student body.

(2) The Top Management Group in the Library Often Does Not Have Clear or Appropriate Standing Within the University's Organization Structure

The role of the librarian in the organization of many university communities is uncertain.

The university librarian should be viewed as a university-wide administrative officer, exercising (or capable of exercising) a role

transcending the management of the library. Because the university librarian is responsible for serving the research and teaching needs of the entire university community, his is a unique perspective and a valuable university-wide intellectual and administrative resource. This aspect of the role of university librarian, however, was found not to be clearly defined or perceived by university administrators.

Currently, the trend is toward according the university librarian and top library staff "academic" status through ex officio or regular membership in the academic senate. Although this trend strengthens the ability of the library to play a more intimate role in the university community and respond more effectively to changes in scholarly interests, it does not assure the library of a routine role in the planning process affecting the entire university.

(3) University Libraries Often Have Too Few Middle Level Executives

The pyramidal nature of organization structure found in most university libraries places an extraordinarily heavy burden on the university librarian.

Because of a shortage of middle level administrative staff, the university librarian assumes primary responsibility for management functions normally delegated in the first instance to middle level executives. Such functions include planning and budgeting and professional personnel recruitment and training. In these respects the library's organization structure can be said to be inadequate to meet the managerial requirements of a larger and more complex library functioning in a larger and more complex university community.

(4) Organization Manuals and Position Descriptions Often Are Not Available to Guide Day-to-Day Operations

University libraries generally do not possess manuals of organization containing such items as current:

- Charts of library organization
- Job descriptions for library positions
- Descriptions of the roles and responsibilities of
  - Library
  - Advisory Boards
  - Staff Committees

Because of the absence of such documentation, organizational analysis and planning for the future are impeded.

5. Problems Relating to Staffing

Personnel is the most valuable management resource, particularly in a professional service organization like the university library. As indicated in Chapter I, current trends in the university and the library place

critical demands on the library staff. Several problems related to library staffing are apparent which impede the library's ability to respond to the demands of the contemporary university community.

(1) Staffing Standards Have Not Been Developed and Used in University Libraries

As a professional service organization, the library spends a major proportion of its budget on personnel. However, in most instances standards for staffing the various departments of the library are lacking or are not employed for organizational, budgeting, or control purposes. The standards in question are not rigid personnel ratios related to units of productivity, but guidelines for relating the types and levels of library staff to the administrative and service functions of the library.

(2) Organized Information Is Lacking on Reported Personnel Shortages

It is difficult for some libraries to recruit professional librarians, particularly in universities located away from large metropolitan centers. University librarians reported that the problem is not in the number but in the quality of applicants, particularly for positions as bibliographers and subject matter specialists. There is an increasing need for personnel possessing (1) academic credentials equivalent to those of the faculty and advanced students served and (2) in addition, a degree in library science. Faculty salary schedules in many cases are more attractive than those of the library, which stress administrative responsibility as a basis for compensation rather than professional competence. This situation represents a major competitive factor in attracting and holding higher level professionals in the library.

Organized information, such as an inventory, is lacking on the nature and extent of personnel shortages and training needs in university libraries across the country.

(3) Library Staff Training Programs—Particularly Those Related to Management Skills—Are Generally Inadequate

Perhaps the most serious personnel problem is the lack of management training of library staff. Most library schools have emphasized professional librarian skills in their curricula, with little stress on management training. The problem is noticeable at all levels of library management. An analogy can be drawn to the early days of hospital administration, when the physician exercised both professional and administrative roles.

Formal training programs in library management, offered

internally by libraries or externally by other institutions, are generally lacking. Currently, initial and ongoing training of staff in needed work skills is provided largely on the job on an "as needed" basis by supervisors.

A relatively high turnover is reported in nonprofessional positions, often staffed by student and faculty wives. This entails the problem of training new personnel while maintaining continuing quality in service, particularly in cataloging departments. In addition, the relative costs of full-time versus part-time help have not been determined.

(4) Existing Library Position Levels Do Not Give Adequate Recognition to the Subject Specialist and Other Highly Trained Professionals

Often, position levels and compensation structure for library personnel are established by the university. Professional positions are frequently categorized with university technical personnel, such as engineers and health care specialists. Clerical, secretarial and other supportive personnel are routinely classified in accordance with comparable positions in the university.

Position classifications in libraries are weighted toward supervisory responsibility as a dominant factor in career advancement. Such classifications do not reflect the growing contribution of highly skilled professionals, such as bibliographers, working independently. Compensation levels, accordingly, correspond to the classification structures.

6. Problems Related to Facilities

Most university libraries visited have undergone recent physical expansion to accommodate increased enrollments, collections, and demands for service.

(1) Space Shortages in University Libraries Are Occurring More Rapidly Than Projected

Librarians report that newly constructed libraries are experiencing space shortages more rapidly than anticipated. Increases in student enrollments generally have exceeded projected increases—the basis for development of library space plans. Consequently, the newer buildings will be operating at capacity several years before anticipated.

Some universities, especially those in urban areas, are exhausting available physical space. One solution has been to build library storage facilities at some distance from the campus; however, this

approach is viewed by many librarians and faculty as inefficient and an impairment of service.

(2) There Are Conflicting Views Within the University Regarding the Location of Collections and Facilities

Librarians are caught between conflicting pressures for centralization and decentralization of collections and, consequently, facilities. University administrators desire to hold duplication of collections and dispersal of services to a minimum. Faculty and graduate students press for decentralized departmental libraries. There appears to be a growing trend toward the establishment of large, decentralized libraries covering several major academic fields, such as the life sciences. The more established trend of constructing separate facilities for undergraduate and graduate students continues.

The issue of centralized versus decentralized facilities poses major management problems for university librarians. In planning new construction and considering changes in existing space utilization, the librarian must decide whether it is more efficient and effective to decentralize or to centralize operations. Librarians indicate that little data are available to assist them in making such decisions.

(3) Periodic Analyses of Space Utilization Normally Are Not Undertaken by University Libraries

Consistent with general experience, it is not unusual for actual construction costs of libraries to exceed planning estimates. University administrators face the task of funding increasing (per unit) construction costs within a more slowly increasing total university budget.

Although faced with space shortages, libraries usually do not apply industrial engineering techniques to space utilization. Opportunities exist for improving space use by applying standard industrial engineering techniques.

7. Problems in Financing

Library financing is becoming more complex, due to the development of multiple funding sources to support programs and services. As noted previously, the problem of financing higher education is becoming more critical in light of enrollment trends, inflation, and the need to maintain quality.

(1) A Disparity of Expectations Exists Between the University Library and the University Administration

A lack of communications and understanding often exists between university presidents and librarians on the magnitude of the

financial difficulties confronting higher education and their implications for future financial support of the library.

University presidents stress that libraries cannot expect financial support to continue at past levels which enabled some libraries to double in size over a decade. They believe that libraries can be more responsive to opportunities to effect cost savings through increased interlibrary cooperation, applications of new technology, and selectivity in acquisitions.

In contrast, many librarians indicate that university presidents do not appreciate fully the cost and operational difficulties inherent in moving more quickly in such fields. Also, librarians believe that the presidents are not fully cognizant of the dimensions of the operating realities of the library, including the problems involved in meeting faculty and student expectations for services within existing resources.

The existence of this gulf in communications and understanding regarding the future financing of libraries and their capacity for service suggests an organizational as well as a communications and planning systems problem within the university and the university library.

(2) University Libraries, to an Increasing Extent, Are Required to Seek Alternate Sources of Funding

Substantial portions of annual library expenditures are derived from third party sources (primarily federal grants) supporting a variety of activities. Funding levels of such grants are often uneven and uncertain and pose major overhead administrative problems, including allocation of university and library costs.

The prospect of increasing difficulties in financing libraries at recent growth levels will require that libraries look increasingly to alternate funding sources, such as service fees and new modes and higher levels of federal government financing.

8. Problems Related to Interinstitutional Arrangements

Presently, interinstitutional arrangements for more effective resource utilization largely are limited to:

- Interlibrary loan agreements supplemented by area truck delivery systems
- Use of central or shared cataloging services of the Library of Congress for major portions of domestic and foreign acquisitions
- Agreements with nearby academic institutions according faculty and graduate students mutual reader privileges
- Participation in the Center for Research Libraries' program providing for joint acquisitions and common central storage of little used and expensive library materials

- Participation in regional bibliographic centers such as those developed in Philadelphia and Denver
- Policies and requirements in multiuniversity state systems which provide for regional arrangements among libraries in the state system
- Participation in regional, e.g., New England, arrangements which employ telecommunication linkages among university libraries in sharing computer-based book ordering, cataloging, and book preparation services. Such systems employ Library of Congress bibliographic data in computerized form stemming from the MARC II program.

Isolated situations were found involving agreements among university libraries in geographic proximity to specialize in collection building, and to provide a bus system to transport students between libraries. Other interinstitutional arrangements involve the participation of a number of libraries as regional centers in federal information programs, such as MEDLARS.

Rising library costs, continuing expansion and duplication of collections at increasing rates, and the growing sophistication and specialization of the information needs of scholars combine to create a greater need for interinstitutional cooperation and planning among libraries.

The subject of "networks" has received much attention in the literature on library cooperation. Consortia of libraries are becoming more common, but these in many instances represent more the aspirations of participants than operational reality. The roles and responsibilities (including financial) of individual libraries and linkages of libraries have not been defined with sufficient clarity to permit sustained progress in effecting closer interinstitutional cooperation. Similarly, the responsibilities of institutions of which libraries are a part—namely, the university—have not been articulated.

(1) Inadequate Priority Is Being Accorded to Strengthening of Interinstitutional Linkages Among Libraries

For the most part, it appears that consideration of interinstitutional opportunities for more effective resource utilization has low priority in library planning. Opportunities for regional and national linkages among libraries to (1) minimize duplication of collections, (2) maximize collection strengths, and (3) improve access to holdings are not routinely and aggressively explored in university and university library planning. Rising operating costs, the continued growth in numbers of publications and the increasing demand of scholars for access to broader and more specialized collections require concerted efforts to effect close interinstitutional linkages of research library resources.

The effort to improve the management of national library resources will be difficult because of the autonomous tradition of universities and the new and additional financial requirements inherent in new systems of interinstitutional cooperation. The support of university administrations and the understanding of university faculties will be needed to develop and implement agreements among libraries because of their implications for operating costs and access of the scholarly community to collections.

(2) *University Librarians and University Officials Lack Adequate Information on the Impact of Interinstitutional Library Arrangements on University Costs and the Work of Individual Scholars*

Information is lacking on the costs of services rendered by university libraries under interinstitutional arrangements. Libraries and university administrators report that the cost of interlibrary lending is greater to the university library with extensive holdings than to borrowing institutions.

This situation is indicative of the fact that the major research libraries bear a special burden and responsibility. The holdings of these libraries, because of their extensive and/or unique character, constitute, de facto, a national information resource and merit appropriate recognition in national, regional, and state library resource planning and funding.

The extent to which scholarship is impeded by giving greater emphasis to collection specialization agreements among libraries, supported by greater utilization and improvement of interlibrary loan services, is not known. The impact of delayed access to information and the degree of faculty and student concern and resistance which might be occasioned by increased reliance on library resources external to the university need to be evaluated.

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A summary of the priority problems in university library management is contained in Exhibit I, following this page. The next chapter recommends approaches to their solution.

EXHIBIT I

SUMMARY OF MAJOR MANAGEMENT PROBLEMS IN UNIVERSITY LIBRARIES

MANAGEMENT PROBLEM

I. Planning

- The need for total planning and budgeting systems, which, for the near and longer term, specify (1) the role and requirements of the library in relation to the academic program of the university; (2) the objectives of and plans for academic programs; and (3) the library resources (financial, personnel, and physical, i.e., facilities, equipment, and library materials) needed.

II. Objectives and Requirements

- The need for improved library statistics for use as tools to determine the cost and effectiveness of library programs and services in relation to academic program requirements.

III. Operations

- The need for standards to measure and control the flow of work in the library.
- The need to explore feasible, transferable applications of automatic data processing in the operations of university libraries.
- The need for greater codification of operating policies, systems, and procedures for use in training personnel, controlling operations, and delegating responsibility.

IV. Organization

- The need to strengthen the service delivery capacity of university libraries through formal organizational recognition of several management functions such as planning and budgeting which are vital to effective and efficient resource utilization, delivery of services, and communication flow within the library.

V. Staffing

- The need for internal and external formalized programs for

training library personnel in management techniques and specific work skills.

VI. Facilities

- The need to undertake periodic analyses of space utilization in the library.

VII. Financing

- The need to explore more fully alternate sources of financing of university libraries.

VIII. Interinstitutional Arrangements

- The need for more effective linkages of library resources to assure improved bibliographic control and access and more effective use of national library resources.

Chapter III

RECOMMENDED APPROACHES TO IMPROVED MANAGEMENT OF UNIVERSITY LIBRARIES

Previous chapters have outlined (1) trends in universities and university libraries and their implications for university library management and (2) current and anticipated problems in the management of university libraries. This chapter describes short- and long-term approaches that should be pursued by university libraries in cooperation with university administrations to strengthen methods of effectively using staff, facilities and finances.

In the face of growing financial constraints and manpower limitations, improved management of university library resources can result in more effective use of library personnel, collections and facilities, and finances in support of the delivery of services. Improved management, per se, will not be sufficient to provide the quality and level of services needed to support existing and future academic programs.

To set these recommendations in context, it should be noted that approximately 60% of library budgets represent personnel costs; 30% library materials where prices cannot be controlled; and about 10% equipment (including electronic data processing equipment), outside services and supplies. The dollar-saving opportunities through improved management, therefore, are limited in scope.

- More effective management through improved organization can (1) contribute qualitatively to improved responsiveness and service to library users and (2) provide strengthened supervision and accountability for the quality and quantity of service rendered by a specific individual or staff unit.
- Systematic, well defined procedures for planning and budgeting of resources can assure that available resources are allocated and applied to services that merit priority as determined by a comprehensive program planning process.
- Studies which apply industrial engineering techniques to essentially routine manual procedures common to library operations frequently result in personnel cost saving opportunities ranging from 10% to 20%.
- Studies comparable to the above which focus on space utilization commonly identify space savings in the same order of magnitude.

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- Sufficient time, in most instances, has not elapsed to determine cost savings resulting from automated procedures in library operations, although there appears to be general agreement that the overall quality of and capacity for service has been increased, but operating costs have risen.
- The cost/benefits of strengthened arrangements for interlibrary cooperation must await data derived from operating experience and standards of measurement which are lacking.

While important improvements in services and cost savings are possible through improved management, the realization of large-scale savings or improvements of services can come only from fundamental changes in structures, relationships, methods and levels of library support, or from major reductions in the scope of teaching and research within universities.

1. University and University Library Planning Should Be Strengthened as a Basis for Defining Library Objectives and Requirements

The challenge of rationalizing decisions affecting the future of the university—perhaps the most complex institution in our society—and its library requires that several steps be taken to strengthen resource planning. The use of planning systems will result in greater confidence that limited resources are effectively utilized in furtherance of the mission of the individual university community.

(1) Comprehensive Library Program Planning Systems Should Be Developed

University libraries should not defer actions needed to strengthen library program planning pending developments to improve planning for the university. University libraries should take the initiative in developing planning systems to demonstrate their usefulness in planning and allocating library resources and to encourage more comprehensive planning of academic programs. Such an approach will yield stronger justification of library budget requests.

The Association of Research Libraries should play a major role by sponsoring a study to design a system for use by libraries in developing program plans and budgets for the long- and short-range. The system should provide for specification of:

- Objectives, including:
  - -Overall university objectives which imply library support
  - -Overall library objectives
  - -University program objectives for each academic program area
  - -Library program objectives for each academic program area.
- Program plans, including:
  - -University academic program plans

-Library program plans for (1) support of each academic program area, and (2) services not directly related to academic programs, such as services to the public.

- Resource plans, including:
  -Organization and staffing requirements to implement library program plans
  -Books, materials, equipment, and facilities required
  -Budget requirements, including identification of sources of funds.

The system developed under sponsorship of the Association also should provide for:

- Analytical narrative justification in support of program plans
- Procedures for periodic updating of plans which provide for multiple inputs from and feedbacks to faculty, students, library staff, and the administration of the university and the library
- Library staffing requirements to operate the planning system.

The study approach selected by the Association should include:

- Selection of a university library for a case study to develop a program planning system
- Design of a program planning system for that library which meets the needs of the librarian and university administrators
- Test and adaptation of the system at other universities taking into account selection criteria based upon factors such as type of sponsorship, size, and the nature of planning and budgetary requirements imposed by the university or state authorities (State higher education planning authorities have not always recognized the intrinsic differences between research libraries and those of emerging junior colleges and converted teacher colleges.)
- Identification of personnel and organizational requirements for effective operation of the system
- Development of a report of the study including a manual for program planning in university libraries
- Provision of training programs to acquaint university librarians with the use of program planning techniques
- Review of the study effort by a selected panel of librarians and university planning officers.

Pending implementation of the recommended study, several steps can be taken to strengthen planning for the library.

The university president might, for example:

- Involve the university librarian formally in the planning councils of the university.

- Instruct the university officer responsible for planning to develop agreements between the librarian and the university administration on policies and procedures to keep the librarian periodically informed of plans for changes in programs having a potential impact on the library.
- Designate a university administrator to be responsible for assembling difficult to compile information on faculty plans and decisions impacting on the library and for informing the university librarian periodically of plans, such as new faculty appointments, adopted or under serious consideration having implications for the library. The objective should be to establish an "early warning" system to identify decisions which have planning and financial implications for the university and the library.
- Establish a policy requiring that no new academic program be instituted without prior consultation with and comment by the university librarian.
- Make available, if possible, university staff having planning talent to assist the library in its planning.

The university librarian might, for example:

- Establish procedures within the library that provide for periodic collection, central compilation, analysis, and follow-up by top library management of information gained by the library staff concerning anticipated changes in academic programs which have implications for the library. This process should draw heavily upon the knowledge of subject specialists who should be encouraged to intensify contacts with faculty relating to their needs and requirements for library services.
- Assume the initiative in communicating information to top university officials on plans and decisions within the university community which have significant implications for the library.
- Establish a plans and programs committee of library staff to assist the librarian in reviewing needs and university plans, assessing priorities, and developing program plans in accordance with the recommended elements of effective planning.
- Seek staff or outside assistance qualified in program planning and budgeting and cost/benefit analysis.

(2) Library Budgeting Should Be Strengthened as a Part of Recommended Improvements in the Planning Process

Library budgeting should be an integral part of the program planning process. Budgets should be the financial resource expression of previously developed program plans.

Steps to strengthen library budgeting should be undertaken as a

part of the previously recommended study to develop a model program planning system for university libraries. Specifically, libraries should develop budgets which express financial needs in terms of programs as well as "line items" such as salaries, equipment, and so forth.

In addition, increasing narrative justification should accompany budget submissions which structure justifications for requests in terms of costs and benefits. Although sophisticated cost/benefit analyses, such as the determination of optimum hours of library service, cannot be expected of libraries without qualified staff assistance and more responsive cost accounting systems, the general approach should be employed in budget submissions. The discussion of alternative approaches in terms of projected costs and benefits should become a routine practice, particularly when major program modifications or significant new expenditures for equipment, such as that for automation, are proposed.

(3) The Association of Research Libraries Should Seek Ways in Which It Can Assist in Establishing Formal Planning Systems for Development of Academic Programs

The Association of Research Libraries should disseminate the results of its sponsored research in library program planning to the chief executives of each university in its membership. In addition, the Association should discuss with the American Council on Education ways in which the Association can cooperate with the Council in establishing more formal systems of total university planning. An effort should be made to determine the activities of such organizations as the Western Interstate Commission on Higher Education (WICHE) in the area of university planning in order that duplicative research effort may be avoided and that any group concerned with library management may take advantage of research findings.

2. Several Actions Should Be Taken to Clarify Library Objectives and Requirements

University librarians and university administrators, individually and collectively, should take several immediate and longer term steps to define more clearly the objectives of the library, improve university/library communication, and develop systems to supply management information needs for planning resource allocation and controlling costs in the library.

(1) Librarians and University Administrators Should Seek Agreement on the Role of the Library in the University in Instances Where the Role is Unclear

Clarification of the role of the library is the necessary first step

in a comprehensive planning system and is preliminary to the development of program objectives, priorities, and specific program plans.

The university librarian should articulate in writing the role of the library in support of the university's academic program. He also should explain the responsibility of the library for the continued development of established areas of library excellence and its responsibility as an information resource for the community, state, region and nation. The librarian should seek and synthesize the contributions of staff, faculty, and students in the context of their expectations of the library.

The librarian, after consultation with library staff, faculty, and students, might meet with the president of the university to review the statement of role and obtain his concurrence as a basis for development of library objectives, plans and programs, and budgets. In addition, specific current operating problems might be discussed in the context of the statement of the library's role. The Association of Research Libraries should consider development of a guide or example to assist the librarian in preparing a statement of the library's role in the university.

(2) Librarians Should Take the Initiative in Bringing About Closer University/Library Understanding of Financial Expectations and Needs

Librarians should initiate suggestions for solutions to the communications problem since they evidence the greatest concern about the disparate view of anticipated requirements and levels of future financing of libraries and the extent of the library's responsiveness to the need for management improvement.

The Association of Research Libraries, in cooperation with the American Council on Education, should assure that the report of the present study receives wide distribution among university administrators, university librarians, faculty library committees, and interested faculty.

The planning system and organization studies suggested earlier in this report should yield long-term solutions to this problem through recommendations on procedures to remedy the lack of communications. In the interim, university librarians should meet with their respective university presidents (or designates) to discuss the issues of future funding expectations for libraries and the libraries' plans and problems related to managing library resources more effectively.

The university, at its initiative, should strengthen the formal and routine participation of the university librarian in university-wide administration. It should involve the university librarian and top staff

members in meetings concerned with university-wide program planning and proposed major changes in the academic program.

(3) Management Information Systems Should Be Developed to Support Program Planning, Evaluation, and Control in University Libraries

University libraries should possess management information systems which provide the data needed to plan and evaluate programs and control limited resources effectively and efficiently. Developing a management information system will entail specification of the:

- Types of information needed by specific users for purposes of program planning, control, and evaluation
- Elements of data needed and the formats required for the collection and
- Methods for collecting, analyzing, storing, and retrieving the information.

The proposed study to develop a program planning system for libraries and the current study by Morris Hamburg, of the University of Pennsylvania, of the statistical needs of university libraries will generate data useful to the development of a management information system. However, unless the Hamburg study clearly identifies data needs for library planning, control, and evaluation and specifies a reporting system to supply management routinely with such information, the development of a management information system should be treated as a separate and discrete study effort.

The Association of Research Libraries, therefore, should sponsor a study to design a management information system for university libraries which will provide the statistical data and other information needed for planning, evaluating, and controlling programs. The methodology of the study should follow that recommended for the study to design a system for library planning. The management information study could be incorporated into the study to design a planning system.

3. Research and Other Steps Should Be Undertaken to Improve Operations in University Libraries

Operating policies, systems, and practices govern the flow of work in the library and are essential to the ultimate objective of the library, namely, meeting the information needs of faculty and students.

(1) Operating Policies Should Be Codified into Manuals as Management Guides

Library policy statements should be codified to lighten the supervisory work load of librarians, assure consistent management, and

involve workers in the management process. The librarian should take steps to assure that major policy decisions are expressed in writing, given wide circulation throughout the library, and retained in a compilation of policy statements.

Each library should develop an operating manual containing its:

- Explanation of objectives and program
- Plans and policies for development and use of collections
- Plan of organization
- Personnel policies and practices
- Policies and practices governing provision of services, including:
  -Hours of operation
  -Policies for individual services; e.g., reference, bibliographic, circulation, interlibrary loan, document reproduction, and so forth.

Mechanisms for communicating policies to users of the manual should be specified. Library personnel, especially new personnel, should be advised of the existence of the policy statements and encouraged to use the statements for guidance in their work activities and to suggest changes to management based upon on-the-job experience. The Association of Research Libraries should consider assisting libraries in this effort by developing a basic manual or guide for preparing the operating manual.

(2) Manual Systems Should Be Improved

The Association of Research Libraries should sponsor a study to develop improved procedures, establish work standards, and determine the feasibility of developing model systems for operations in the library that involve essentially manual work systems. The study should focus on book processing activities but also include other manual operations related to circulation control and binding.

The study should have as its objectives the:

- Documentation of existing procedures used in manual operations
- Determination of opportunities for improved procedures
- Development of standards for determining productivity in manual work processes
- Investigation of opportunities for improved efficiency through mechanization of selected operations
- Development of one or more systems models for manual operations in the library.

The study approach should include:

- A survey of manual operations in three to five selected university libraries (perhaps more depending on the extent of diversity in manual systems)
- Flow charting and textual documentation of existing procedures
- Analysis of findings to determine opportunities for improved procedures and the feasibility of developing model systems for manual operations in libraries
- Development of a study report including a manual for implementing the recommended systems
- Review of the study effort by a panel of selected librarians and possibily manual systems analysts from library or university staffs.

(3) University Libraries Should Give Increased Emphasis to Exploring Applications of Automatic Data Processing to Their Operations

The Association of Research Libraries should sponsor efforts to provide more technical information on automatic data processing in libraries as a guide to librarians in planning for the future use of data processing. The effort should seek information on the following questions:

- What are the characteristics of successful applications?
- What are the characteristics of unsuccessful applications?
- What elements of successful applications might be transferable to other libraries?
- What are the relative cost/benefit factors to be considered?
- What strategies are appropriate for the application of automatic data processing to libraries, including the issue of how the requirements of the library should interface with the existing and anticipated data processing capabilities within the university?

The study should be approached in two phases. The first phase should be directed toward inventorying, describing, and initially evaluating existing applications in terms of the questions set out previously. This might be accomplished by establishment of an automation information clearinghouse capability by the Association of Research Libraries. One approach might be to bring together a small, expert evaluation team which would supply research libraries with reliable information in this field.

Techniques which should be considered in obtaining information needed for evaluation include:

- Field visits to selected universities (perhaps seven to nine) to appraise a representative sample of known existing applications of automatic data processing in university libraries
- Based on the field experience, the development, testing, and administration of a mail questionnaire to a sufficient number of university librarians to obtain basic data from the universe of research libraries related to the above questions
- Review of the literature and appraisal of the state of the art in automatic data processing as applied to university library operations, complemented by interviews with equipment manufacturers
- Analysis of cost/benefit factors to the extent possible
- Preparation, review, and dissemination of reports to the membership of the Association and to university administrators responsible for data processing activities
- Review of ongoing efforts by a panel of selected librarians and library and/or university systems analysts.

The second phase should detail the strategies and systems required for libraries to take greater advantage of automatic data processing in their operations. The research in all phases should emphasize the long-range benefits to libraries of automated procedures, rather than short-range benefits.

(4) Universities and Libraries Should Examine Their Requirements for Library Cost Accounting

The recommended new program-oriented university and library planning systems will generate a requirement for cost data which may not exist, or be capable of being produced readily, under existing accounting systems. It may be necessary to give university accounting systems the capacity to produce the required data to determine, for example, the costs associated with programs and activities, such as reference services, special reader services, and space utilization costs under alternate storage arrangements.

If the need for such cost data and systems to obtain it are established as a result of conducting the recommended studies to develop planning and management information systems, the Association of Research Libraries should sponsor a study to develop a cost accounting system for general application in university libraries.

The study approach should include:

- Field work at perhaps two or three selected universities, involving determination of needed changes in university accounting systems to support recommended changes in planning and management information systems

- Design of a uniform cost accounting system for university libraries and specification of needed changes in university accounting systems
- Preparation and dissemination of the study report to the membership of the Association and to university finance officers
- Review of the study effort by a panel of selected librarians and university officials having financial accounting responsibility.

In the interim, the university librarian should meet with the university financial officer to explore the possibility of modifying the university accounting system to provide cost data to support improved program planning and budgeting and to take advantage of any recent university cost studies.

4. Research on Improved Organization Structures for University Libraries Should Be Conducted

The Association of Research Libraries should sponsor a study of feasible, improved forms of university library organization to meet changing library requirements, increased specialization among staff, and current and anticipated program and professional needs. The research study should:

- Define library organizational requirements to meet current and foreseeable demands for library services
- Appraise existing patterns of library organization in light of changed requirements
- Describe library functions and the types and numbers of personnel required to discharge them
- Evaluate channels of communication among library staff and between library staff and groups such as faculty, students, the university administration and library administration
- Develop alternate plans of organization, taking into account library objectives, the availability of qualified library personnel, and the professional needs of librarians.

The approach to the study should include:

- Field visits to three or four universities to appraise existing plans of library organization in light of trends and needs related to programs and services, and personnel requirements. Criteria for selection of the universities should include library involvement in a regional library network, extension programs, and interinstitutional agreements.
- Possible use of a questionnaire to a broader sample of libraries focusing on past, current, and planned approaches to library organization

- Development of findings and recommendations for improved organizational approaches
- Review by a panel of librarians appointed to guide the study. The librarians should be heavily involved in the study process.
- Distribution of the report and action plan to university librarians for their consideration and implementation in their respective libraries.

If possible, this study should be phased so that the findings from the recommended study on critical library personnel needs are available for review and analysis during the period of the organization study.

5. A National Approach to Resolving Library Manpower Problems Should be Adopted

The Association of Research Libraries should support current and future efforts to identify short-range and long-range needs for university library personnel and the anticipated availability of such personnel. Such study efforts should:

- Identify, describe, and classify key professional and subprofessional library positions, and specify the professional and managerial education and skill requirements for each position; recommend new job titles, if necessary
- Identify current and long-range requirements for personnel in each job category
- Specify the current staffing situation in each job category, identifying surpluses and shortages
- Identify the anticipated long-range output of library schools and the anticipated surplus or shortage of trained personnel for each job title.

The Association of Research Libraries should consider sponsorship of a clearinghouse of information on research library manpower needs and development. Valuable inputs could be (1) the findings of the current study by Donald Cameron, sponsored by the Council on Library Resources; (2) studies funded by the United States Office of Education, such as that being conducted by the Rutgers University Library School; and (3) other studies such as those undertaken by Paul Wasserman at the University of Maryland. Emphasis should be placed on enhancing formal and continuing educational opportunities in management skills.

6. Increased Emphasis Should Be Given to Management Considerations in Library Facility Planning and Space Utilization

The problem of centralization versus decentralization of library facilities on campuses has been and will continue to be of major concern to university librarians, scholars, and university administrators.

The problem is complex and differs considerably from institution to institution. Variables in the problem include: (1) the proportion of graduate to undergraduate students; (2) the relative emphasis given to areas of graduate study and research; (3) size of campus and space availability on and surrounding the campus; (4) past and current practices in centralizing or decentralizing facilities and services; and (5) the shifts in the intellectual interests of faculty.

In light of these factors, a separate study of library facility centralization should *not* be undertaken by the Association of Research Libraries.

Two of the studies previously recommended may yield findings and recommendations bearing upon this problem.

- The proposed study to develop feasible, improved plans of organization for university libraries will, of necessity, produce recommendations on the distribution of functional responsibilities and the structuring of working relationships in a centralized versus a decentralized organizational setting.
- The proposed studies to develop model systems for manual operations and to investigate applications of automation in university libraries will yield findings on improved systems and procedures which may have a major impact on decisions to centralize or decentralize library facilities.

7. Increased Emphasis Should Be Given to Pursuit of Additional Sources of Financial Support of University Libraries

As previously indicated, there is growing evidence that university libraries will be supported in the future at less than the budgetary growth rates of the past decade or two. To accommodate rising costs and anticipated increases in user demands and, at the same time, to maintain quality in collections and services and pursue potential management improvements through strengthened interinstitutional arrangements and increased automation, will require access to alternate funding sources for libraries.

(1) The Association of Research Libraries, with the Support of the American Council on Education, Should Continue to Seek Increased Federal Support of University Libraries

The federal government is the logical source of needed additional funding from the standpoint of its (1) vital interest in preserving and expanding the intellectual resources of the nation, and (2) singular capability to commit funds of the magnitude necessary to meet the requirements specified above.

It is recognized that existing federal support of libraries is essentially categorical in nature (facilities, library materials, indirect but

vital support through regional networks for medical information, services provided by the Library of Congress, fellowships in library science, and so forth), limited in relationship to indicated need, and cut back significantly in current budget requests. The Association of Research Libraries, nevertheless, should continue its efforts to gain expanded federal support for libraries.

Specifically, the Association should consider advancing legislation that would provide grants to universities to strengthen existing research library resources without specification of category. Appropriate recognition should be given to the desirability of strengthening research libraries possessing distinctive subject matter collections which are national in importance. An analogy is the federal program providing general research support grants to medical schools to enable them to "catch up" and expand their resources. A comparable program for libraries would permit the general strengthening of the university and could provide for a broader distribution of intellectual resources by permitting many university libraries to bring themselves abreast of current and anticipated needs.

Because of common interest in the potential benefits of such a program, the Association of Research Libraries and the American Council on Education should pursue this objective jointly as well as collaborate in support of efforts to fund existing federal programs at needed levels.

Other third party sources should be evaluated as to their present and future potential for support of research libraries.

- Private philanthropy—This source is reportedly leveling off as a source of external library support.
- Foundations—The enactment of legislative restrictions resulting in the accelerated disposition of foundation resources could make the foundations a more significant source of third-party funding for research libraries.
- State governments—The leveling off of expenditures for higher education and the growing public pressures for governmental expenditure control offer little immediate prospect for significantly increased funding for libraries over current levels.
- Fees and royalties—Possibilities exist of increasing existing charges and adding new charges to users of library services. This approach, however, raises fundamental questions about the role of the library as an educational and public service resource and the extent to which it should be a "free" learning resource.

(2) University Librarians Should Work on a Continuing Basis with University Officials to Discuss Financial Needs and Alternate Sources of Funding for Library Operations

University librarians individually should explore with university officials the possibilities of establishing or increasing fees for rendering some library services. This effort, of course, must take into account long standing policies (and, in some cases, legislative mandates) which deter this approach to the funding of all or a proportion of library services. However, the indicated magnitude of the financial need of libraries and the prospect of increasing difficulties in providing adequate financial support from traditional sources warrant increased consideration of this approach to library financing.

8. Opportunities for Increased Interinstitutional Cooperation in the Use of Library Resources Should Be Pursued More Aggressively

Management improvement in the use of library resource material merits a high priority in the program of the Association of Research Libraries in light of identified needs for improved bibliographic control of and access to information resources external to the campus. Because of anticipated reservations from many faculty members, research in this area will have to be carefully planned, gradual in impact, and reasonably well funded.

(1) The Association of Research Libraries and the American Council on Education Should Jointly Sponsor Research Designed to Define New Approaches to and Requirements for Interinstitutional Cooperation

The research should:

- Ascertain the cost to university libraries (and universities) of providing and participating in present interinstitutional arrangements such as interlibrary lending
- Investigate new opportunities for interinstitutional arrangements, structures, and institutions to conserve resources, including state, regional, and national networks of libraries
- Investigate the impact on the productivity and effectiveness of the work of the individual scholar of existing and possible future interinstitutional arrangements for sharing of library resources
- Examine new approaches to state, regional, and national access to and linkages of library resources that show special promise for research libraries

- Identify the organizational, financial, and facility requirements for greater interinstitutional cooperation in the use of library resources and specifically mechanisms for (1) essentially a common apparatus for bibliographic control of scholarly materials and (2) effective joint access to resources
- Define roles and responsibilities of the university, the library, and third parties, such as the state and federal governments, in the organization and funding of new interinstitutional arrangements.

The study approach should include:

- Field visits to selected universities to obtain data on the costs and patterns of utilization of interlibrary loan and other existing interinstitutional arrangements
- Interviews with selected university, public, state, and national librarians to identify feasible new approaches to library cooperation. Special emphasis should be placed on examining the role of the Library of Congress and the other national libraries in future interinstitutional arrangements. The states also have a leadership role to play, since state library planning has been extensive over the last decade.
- Interviews with and a possible mailed questionnaire to a sample of scholars to determine the impact of increased interinstitutional cooperation on the use of library resources
- Interviews with university administrators to assess the organizational and financial implications of closer interinstitutional cooperation; investigation of the impact of present methods of funding libraries on interinstitutional cooperation
- Preparation and dissemination of the study report to the membership of the Association of Research Libraries and the American Council on Education
- Review of the research effort by a panel of selected university, public, state, and national librarians and university administrators.

(2) Consideration of Interinstitutional Arrangements and the Financial Needs of University Libraries Should Take into Account the Potential Role and Service Capabilities of the Library of Congress, Other National Libraries, and Organizations Such as the Center for Research Libraries

To an increasing extent, it is apparent that current and planned development of the bibliographic services of the Library of Congress is an essential link in efforts to effect closer interinstitutional arrangements and a primary library resource meriting augmented funding for

the benefit of university libraries and libraries generally. The machine-readable catalog (MARC II) project of the Library of Congress has enormous implications for libraries in terms of ease of access to and control and transmission of bibliographic data. To a large degree, the development of regional networks among libraries is dependent upon the research and service capacity of the national libraries.

The Association of Research Libraries, in cooperation with the American Council on Education, should establish committee and program structures to cooperate with and enlist support for such developmental and service programs undertaken by the national libraries.

In addition, the experience of a successful national consortium, such as the Center for Research Libraries, should be evaluated and contrasted with regional arrangements, such as MEDLARS.

Planning should also take account of the role of the state library and state library agencies. The states in recent years have been increasingly active in planning and should exercise leadership responsibilities in developing linkages among libraries and in funding research library activities.

* * * * * * *

A summary of the recommended approaches to the solution of problems identified in university library management is contained in Exhibit II, following this page. It provides a summary classification of recommended actions in relation to the groups and institutions which should undertake them. The next and last chapter of this report identifies the steps required to sponsor, organize, and finance the recommended actions.

EXHIBIT II

SUMMARY OF RECOMMENDED APPROACHES TO MAJOR MANAGEMENT PROBLEMS IN UNIVERSITY LIBRARIES

RECOMMENDED ACTION

PROBLEM	ASSOCIATION OF RESEARCH LIBRARIES	ASSOCIATION OF RESEARCH LIBRARIES & AMERICAN COUNCIL ON EDUCATION	UNIVERSITY AND LIBRARY	LIBRARY	UNITED STATES GOVERNMENT
1. Planning • The need for comprehensive university library program planning systems.	Conduct recommended research to develop library planning systems	Continue cooperation in the development of improved planning systems	Involve the librarian and top staff in university planning councils Develop procedures to improve flow of information to the library on evolving academic plans	Establish systematic procedures for gathering information on evolving academic programs Strengthen staff expertise in planning and budgeting techniques Develop improved narrative program justification which stresses cost/benefit analyses	
2. Objectives/Requirements • The need for improved library statistics for use as tools to determine cost/effectiveness of library programs and services	Develop guide for defining the library's role in the university Conduct recommended research to develop library management information and reporting systems	Cooperate to disseminate current study report to their respective memberships	Seek agreement, where required, on the library's role in the university	Articulate role of library, where required, more adequately	
3. Operations • The need for standards to measure and control work flow • The need to explore feasible, transferable applications of automation in library operations • The need for greater codification of operating policies, systems, and procedures	Conduct recommended research to develop work standards and model manual systems Encourage research and exchange of information on library automation and feasible transferable data processing systems Develop guidelines for operating policy manuals		Examine needed changes in accounting systems to provide improved cost data	Develop manuals which codify operating policies and procedures	

4. Organization • The need to evaluate alternative forms of library organization and strengthen several management functions vital to effective and efficient resource utilization and communication flow	Conduct recommended research to determine alternate feasible plans of library organization and staffing		Arrange to involve top library staff more formally and systematically in university planning and decision making	Develop strengthened staff capabilities in planning, budgeting, and personnel training and development Develop organization and operating manuals	
5. Staffing • The need for internal and external formalized programs for training library personnel in management techniques	Continue to encourage recommended research to determine national manpower needs and training requirements; provide manpower information clearing house functions			Broaden training opportunities for development of management skills	
6. Facilities • The need for undertaking periodic analyses of space utilization in the library	Disseminate results of recommended studies impacting on facilities decisions Review space implications of proposed study to develop model manual systems			Conduct periodic analyses of space utilization using industrial engineering techniques	
7. Financing • The need to explore more fully alternate sources of financing of university libraries	Propose legislation for general federal support of research libraries	Distribute current study report to university presidents Seek increased federal financial support for libraries	Involve librarian and top staff in university-wide program and resource planning	Initiate discussions with university president on future library funding expectations and alternate financing methods	Strengthen and broaden financial support of programs benefiting research libraries
8. Interinstitutional Arrangements • The need for more effective linkages of library resources to assure improved bibliographic control and access and more effective use of national library resources	Conduct recommended research to assess existing and new opportunities for interinstitutional cooperation—with close involvement of Library of Congress, other national libraries, Center for Research Libraries, and state library planning agencies	Cooperate in investigating strengthened interinstitutional cooperation in use of library resources	Define, where necessary, the responsibilities of the library in interinstitutional cooperation		

CHAPTER IV

PLAN OF ACTION

The recommended approaches to improving the management of library resources will require sustained effort on the part of many groups and the investment of considerable time and financial resources. It is essential that such efforts be conducted according to a well defined plan of action. The considerations and steps which should guide implementation of the recommended approaches to solving management problems in university libraries are outlined in this chapter.

1. The Proposed Research Program Should Be a Phased Effort

The recommended phasing of the proposed studies to seek solutions to major management problems in university libraries is set forth in Exhibit III.

The recommended studies in the areas of planning (and management information) systems, manpower development, and manual systems can be initiated and completed independently of each other. Each lacks a dependency on the others in terms of data collection, analyses, and recommendations.

An overlap is recommended in the phasing of the studies focused on library manpower development and organization structure. The recommended study of organizational alternatives for libraries should be initiated with the benefit of findings on library personnel practices.

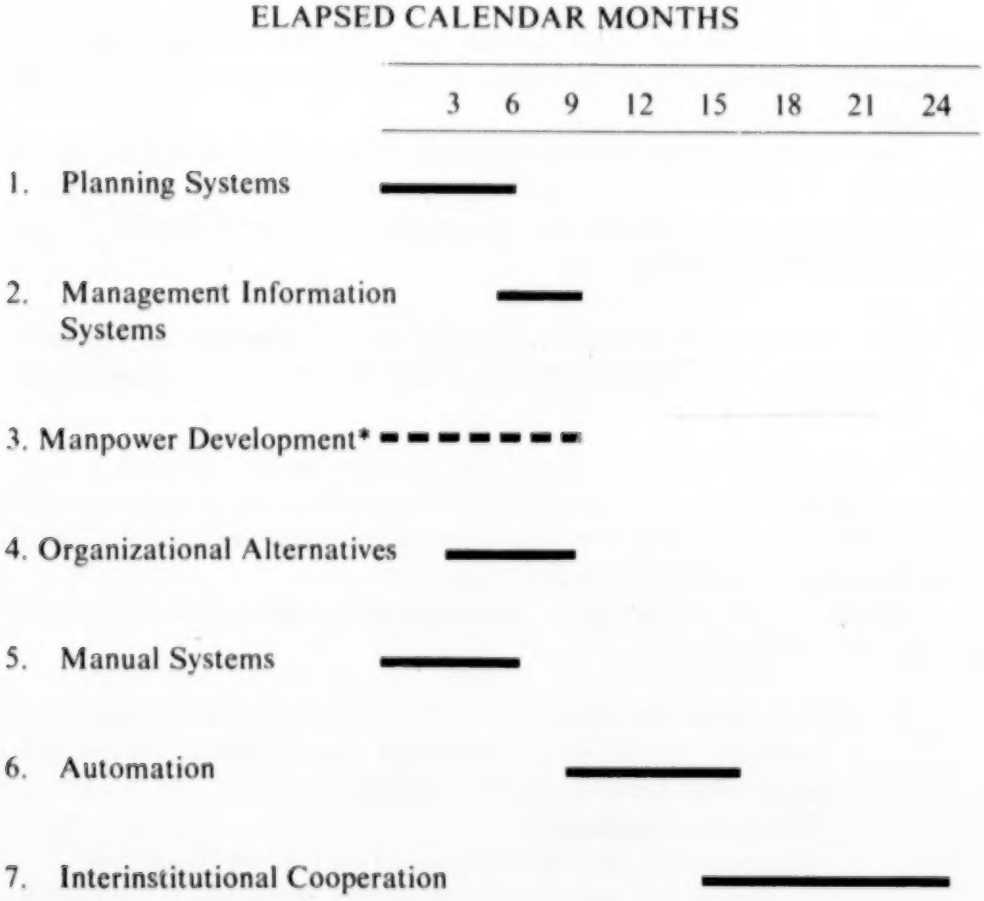
The recommended study of automated systems should not be initiated until the recommendations of the planning systems and manual systems studies are available. These studies should identify opportunities for applying automation to the planning process, management information systems, and to manual systems.

The proposed study to determine feasible new approaches to closer interinstitutional arrangements should be initiated with the benefit of recommendations of the other studies, particularly those concerned with planning and automated systems.

The recommended phasing in terms of elapsed time represents an optimal approach to implementing the proposed studies. It is recognized that the availability of funding support to permit concurrent initiation of some studies is crucial to completion of the research effort within a two-year time span. Nevertheless, the phasing depicted in Exhibit III serves to illustrate (1) the potential results (and benefits) possible from

EXHIBIT III

RECOMMENDED PHASING OF PROPOSED RESEARCH IN UNIVERSITY LIBRARY MANAGEMENT PROBLEMS



* Not recommended as a formal research program provided current research projects in this field yield needed information.

a concentrated application of research resources to immediate management problems and (2) the independent and dependent relationships among the various studies.

2. The Association of Research Libraries Should Sponsor the Proposed Management Research Program

Consistent with its past role in stimulating and undertaking research benefiting its membership, the Association of Research Libraries should assume responsibility for initiating, sponsoring, guiding, and disseminating the results of proposed research in university library management problems.

The Association should continue to seek the cooperation of other professional associations, such as the American Council on Education, in research studies aimed at common problems confronting university libraries.

The Association also should stimulate other professional associations to sponsor studies in areas impacting on the effectiveness of university library management, such as the recommended study to develop a total university planning system.

3. The Association of Research Libraries Should Establish a Committee Responsible for Securing Funding for the Proposed Management Research Effort

The board of directors of the Association should appoint a committee of three to four members (perhaps drawn from the present advisory committee) to work with the executive director in obtaining financial commitments for the recommended study effort.

The committee should adopt and implement a plan of action encompassing the following steps.

- The committee chairman, upon consultation with committee members, should assign individual responsibilities for contacting possible funding sources, such as:
  - -Charitable foundations
  - -Organizations, such as the Council on Library Resources
  - -Governmental agencies, such as the Department of Health, Education and Welfare.
- The research orientation and objectives of each funding source should be identified.
- Individual funding sources should be approached with one or more proposals for funding. As required, consultants should be involved informally to assist in any needed refinement and modification of the proposals.

4. The Funding for the Individual Studies Should Provide for Needed Staff Support to the Association

Sponsorship of the management research effort by the Association will entail additional costs involving:

- The time of the executive and associate executive directors in administering the program
- An additional staff member
- Clerical and office services support
- Expenses, such as honoraria and travel related to meetings of advisory panels for the various studies.

An additional staff member may be required to assist in the administration of the studies in the event that (1) the work loads of existing staff preclude devotion of adequate time to research administration and (2) the actual phasing of the proposed studies results in a high degree of concurrency among the individual research projects.

Each proposal submitted to a funding source should request an amount for contract administration by the Association deemed adequate in light of the anticipated needs of the Association at the time of submission.

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This chapter concludes the report on major problems in the management of university libraries. With the horizons of knowledge expanding at an accelerating rate, university libraries constitute a vital national intellectual resource. The challenge of managing the existing and future resources of the research library has never been greater and more critical, in light of growing financial problems and the need to apply new technology and new approaches to the task of serving the sophisticated demands of contemporary teaching and research.

The findings and recommendations of this study are designed to aid both the university librarian and university administrator in realizing improved library resource management.

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